

Colloquium II: August 31, 2020

# Shinpei Goto

The most famous  
person in the  
history of Nagoya  
University School of  
Medicine, and of  
public health in  
Japan

*Nagoya University Medical Museum*  
*Small Exhibit 5th*

ミニ展示会

## 愛知医学校長 後藤新平

—「大風呂敷」と呼ばれた男の名古屋時代—



2013 9. 25 WED - 2014 1. 31 FRI  
平日 9:00-20:00  
9月25-27日、30日、2014年1月6日-7日は9:00-17:00  
土 13:00-17:00  
休館日: 日・祝日、9月28日、年末・年始(12月28日-1月4日)

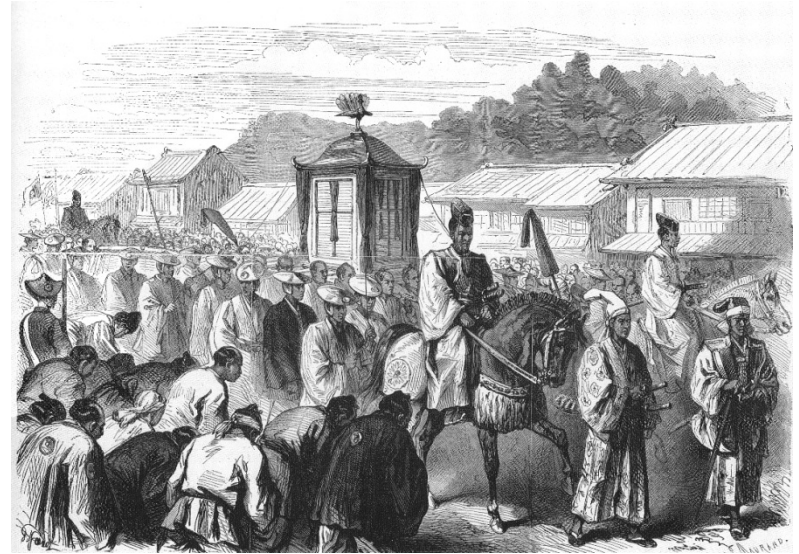
名古屋大学附属図書館 医学部分館 2階入口ホール  
問合せ先: 名古屋大学附属図書館医学部分館  
名古屋市昭和区鶴舞町65  
TEL 052-744-2505

入場無料



# History in Japan

The Emperor Meiji from  
Kyoto to Tokyo in 1869



©Wikipedia

1867 The Meiji Restoration

**1868** The first year of Meiji era

1874 Law on medical system 医制

1876 National examination to allow practice at clinic

1883 Law of licensing doctors, leading to the abolition  
of Chinese medicine

1894 First Sino-Japan War

1904 Russo-Japan War

**Gotō Shinpei**  
(1857-1929)



©Wikipedia

# Nagoya University Medical Library

Albrecht von Roretz (1846-84)  
Invited professor from Austria

1894-95 First Sino-Japan War  
1904-05 Russo-Japan War



Sinpei Goto 1857-1929  
Director of Aichi Hospital and School of Medicine  
(former Nagoya Univ. Sch. of Med.)

# Taisuke Itagaki



<http://www.banknoteworld.it/japan.htm> 2020/12/2



Dr. Goto treated  
Politician Itagaki in Gifu.



[https://www.excite.co.jp/news/article/Japaaan\\_86068/](https://www.excite.co.jp/news/article/Japaaan_86068/) 2020/12/2

When Taisuke Itagaki was attacked  
and injured by a thug in Gifu, 1882,  
he said "Itagaki may die, but liberty  
never!"

[https://www.izumishobo.co.jp/onlinebook/c02\\_denki/itagaki/itagaki1.html](https://www.izumishobo.co.jp/onlinebook/c02_denki/itagaki/itagaki1.html) 2020/12/2





# Gotō Shinpei

(July 24, 1857 – April 13, 1929)

[https://en.wikipedia.org/wiki/Got%C5%8D\\_Shinpei](https://en.wikipedia.org/wiki/Got%C5%8D_Shinpei)



©Wikipedia

Gotō was born in Isawa, Mutsu Province (present-day in **Iwate Prefecture**). He entered **Sukagawa Medical School** in **Fukushima** Prefecture at the age of **17**, and became a doctor in Nagoya after graduation. In 1877, he served as a government medic during the Satsuma Rebellion.

In **1876**, a doctor of Aichi Prefectural Hospital

In **1881**, president of Aichi Prefectural Hospital

In **1882**, treated Itagaki

In **1883 at age 26**, moved to Ministry of Internal Affairs

# History of the University

[http://en.nagoya-u.ac.jp/about\\_nu/history\\_data/history/index.html](http://en.nagoya-u.ac.jp/about_nu/history_data/history/index.html)

In 1867 The Meiji Restoration

In 1871, Temporary Medical School/Public Hospital,  
under the guidance of Keisuke Ito and other pioneers  
from the Nagoya Domain's Smallpox Vaccination Clinic

Goto Shinpei at Nagoya  
1876 to 1883

In 1881 Aichi Medical School

In 1903 Aichi Prefectural Medical College

In 1920 Aichi Medical College

In 1939 Nagoya Imperial University

In 1949 Nagoya University

Having distinguished himself through his work at the Nagoya Medical School and at the military hospital in Osaka during the Satsuma Rebellion, Gotō joined the **Home Ministry's Medical Bureau** (衛生局) in 1883, eventually becoming its **head**. While at the ministry, in 1890 he published his **Principles of National Health** (国家衛生原理) and took part in the creation of **new sewage and water facilities in Tokyo**. This recommended him to Army Vice-Minister Kodama Gentarō (1852-1906), who made Gotō chief of the **Army Quarantine Office** looking after the return of more than 230,000 soldiers from the **Sino-Japanese War** (1895-95).



# Gotō Shinpei

(July 24, 1857 – April 13, 1929)

In 1929 The Great Depression

Poster for the recruitment of officers with medical doctor license to Ministry of Health, Labour and Welfare, Japan



©Wikipedia

He was a statesman and cabinet minister in the Taisho and early Shōwa period Empire of Japan.

After First Sino-Japan War in 1894-95, Taiwan was ceded to Japan.

He served as

1. the head of civilian affairs of Taiwan under Japanese rule in 1898-1906 ,
2. the first director of the South Manchuria Railway in 1906-08,
3. the seventh mayor of Tokyo in 1919-23,
4. the first Chief Scout of Japan,
5. the first director of NHK (Japan Broadcasting Corporation)
6. the third principal of Takushoku University, and
7. the Home Minister and Foreign Minister of Japan.

In 1923 The Great Kanto Earthquake



# History of Taiwan

[https://en.wikipedia.org/wiki/History\\_of\\_Taiwan](https://en.wikipedia.org/wiki/History_of_Taiwan)



©Wikipedia

Prehistory	to 1624
Dutch Formosa	1624-1662
Spanish Formosa (north part)	1626-1642
Kingdom of Tungning (Ming dynasty from main land of China)	1662-1683
Qing rule	1683-1895
Japanese rule	1895-1945
Republic of China rule	1945-present

Formosa = Taiwan, Kingdom of Tungning = Kingdom of Formosa

# Shinpei Goto (1857-1929)

- Era of acute infectious diseases
- Era of poverty without social infrastructure

1874 Law on medical system 医制

1875 Medical Bureau in Home Ministry 内務省衛生局設置

1879 Epidemic of cholera in Japan

\* Discovery by Filippo Pacini in 1854

1884 *Vibrio cholerae* found by Koch\*

1885 Method for sewage system by [Goto](#) “Proposal to implement the policy against cholera”

1889 Sanatoriums of tuberculosis

1890 Study in Germany of [Goto](#)

1897 Implementation of Infectious Diseases Prevention Act against cholera, dysentery, typhoid, smallpox, typhus fever, scarlet fever, diphtheria, and plague

1898 [Goto](#) age at 41 years to Taiwan as the head of civilian affairs

1898 Monopolization of tobacco in Japan

1903 Monopolization of camphor in Japan

1905 Monopolization of salt in Japan

1910 Vaccination against smallpox

1929 Discovery of penicillin, the Great Depression

1938 Establishment of Ministry of Health



Public health and governing foreign territory

## Shinpei Goto and public health policy

Nobuyuki Hamajima,  
Nagoya University Graduate School of Medicine



Dr. Goto, Director of  
Aichi Prefectural Hospital

## Definition of public health by Winslow CEA (1877-1957)

Public health is the art and science of preventing disease, prolonging life and promoting physical and mental efficiency through the organized community efforts.

# Administration in Taiwan by Goto 1898-1906

Railway construction  
Port construction  
Measurement of land

} Establishment of economy basis :  
Life improvement is accompanied  
with hygiene (sanitation).

Monopolization of  
Salt  
**Camphor** (insect repellent)  
Tobacco  
**Opium**

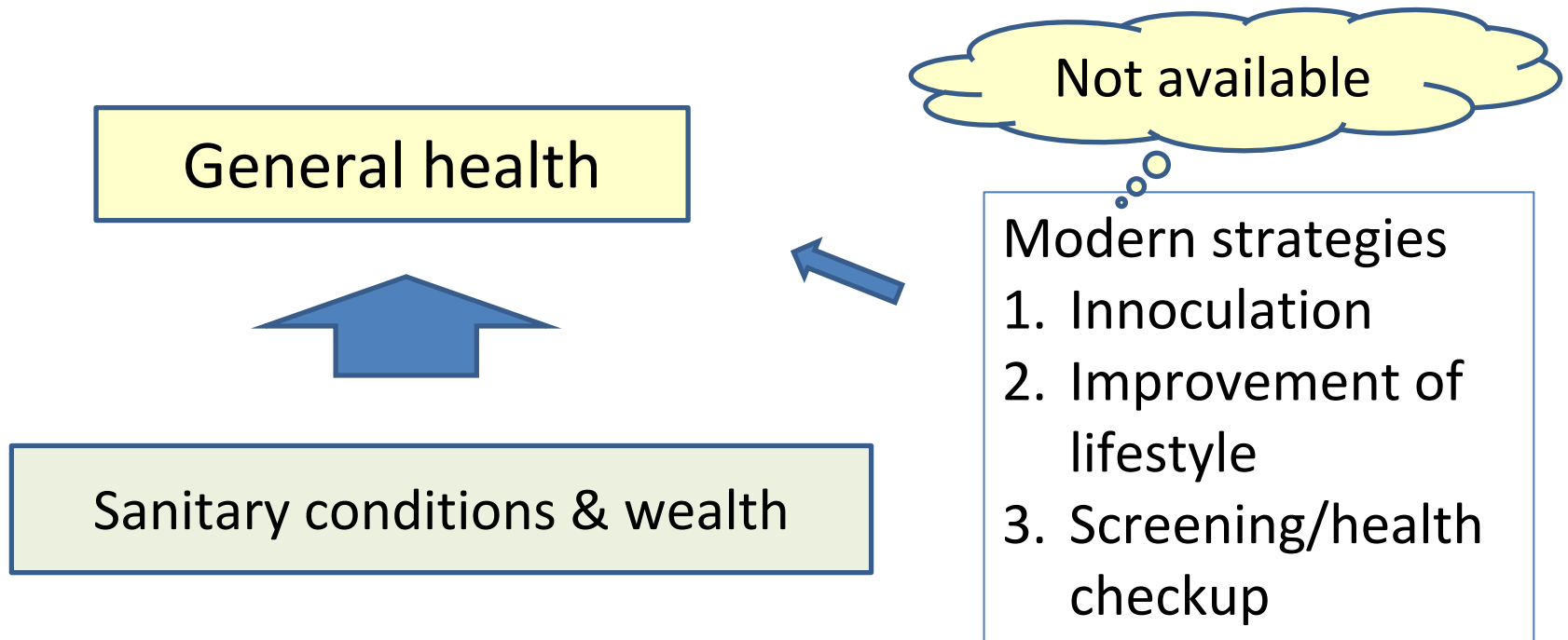
} The enactment with the similar  
pace to that in Japan.

- Facility construction for water supply and sewage system
- Foundation of Taiwan Medical School in 1899 (Meiji 32nd)
- Public doctor system : 120 medical doctors were invited from Japan
- Taiwan Central Institute in 1907 (Meiji 40<sup>th</sup>)

Goto believed that hygiene administration is important.

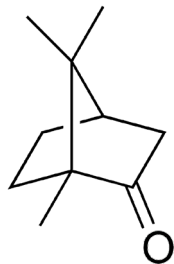
He described in his autobiography that he addressed in 1886 that the level of hygiene deserves the fate of country.

While at the ministry, in 1890 he published his Principles of National Health (国家衛生原理) and took part in the creation of new sewage and water facilities in Tokyo.



# Camphor

樟腦 しょうのう



**Camphor** (pronounced 'kæmfər') is a waxy, flammable, white or transparent solid with a strong aromatic odor. It is a terpenoid with the chemical formula  $C_{10}H_{16}O$ . It is found in wood of the **camphor laurel** (*Cinnamomum camphora* くすのき), a large evergreen tree found in Asia (particularly in Sumatra, Borneo and **Taiwan**) and also of *Dryobalanops aromatica*, a giant of the Bornean forests. It also occurs in some other related trees in the laurel family, notably *Ocotea usambarensis*. Dried rosemary leaves (*Rosmarinu officinalis*), in the mint family, contain up to 20% camphor. It can also be synthetically produced from oil of turpentine. It is used for its scent, as an ingredient in cooking (mainly in India), as an embalming fluid, for medicinal purposes, and in religious ceremonies.



# Celluloid



**Celluloids** are a class of compounds created from nitrocellulose and **camphor**, with added dyes and other agents. Generally regarded to be the first thermoplastic, it was first created as **Parkesine** in 1862 and as **Xylonite** in 1869, before being registered as **Celluloid in 1870**. Celluloid is easily molded and shaped, and it was first widely used as an ivory replacement. Celluloid is highly flammable and also easily decomposes, and is no longer widely used. Its most common uses today are in **table tennis balls** and **guitar picks**.



©Wikipedia

Table tennis balls



©Wikipedia



©Wikipedia

Celluloid and sterling silver pen

# Monopolization of Camphor

In 1863, Taiwan government monopolized camphor, as well as saltpeter (potassium nitrate) and sulfur

In 1868, the monopolization was abolished because of the opposition of England embassy. Foreigners allowed to export camphor freely, resulting in the actual monopolization by England.

In 1887, the second monopolization by Taiwan government, but again imposed to abolish it by England.

At that time, Taiwan and Japan were the only production countries. The price was controlled by countries other than Taiwan and Japan.

In 1898, Goto issued the monopolization. The civilian affairs of Taiwan decided the price and amount exported to each country.

The benefits was 13 millions yen in eight years, which was used for Taiwan project public bond.

# Evaluating the Goto's performance in terms of public health

## Avedis Donabedian' method

- Structure  
e.g. New organizations
- Process  
e.g. Documentation
- Outcome  
e.g. Disease prevention

In terms of **structure** and **process**,  
starts from nothing  
Infectious disease prevention law  
Disinfection work  
Train quarantine law  
Quarantine stations and facilities

In terms of **outcome**,  
sanitation, resulting in infectious  
disease prevention (malaria, plague,  
cholera, dysentery, etc)



## Opium monopolization

Governing ?  
Economical merits ?  
Public health ?

# First Opium War



The **First Anglo-Chinese War** (**1839–42**), known popularly as the **First Opium War** or simply the **Opium War**, was fought between the United Kingdom and the Qing Dynasty of China over their conflicting viewpoints on diplomatic relations, trade, and the administration of justice.



# Narcotics 麻薬 from plants

Opium アヘン

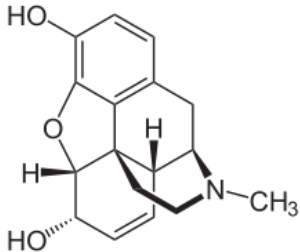


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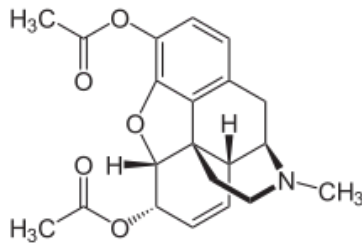
Opium poppy



Morphine



Heroin



Cannabis 大麻  
Marijuana

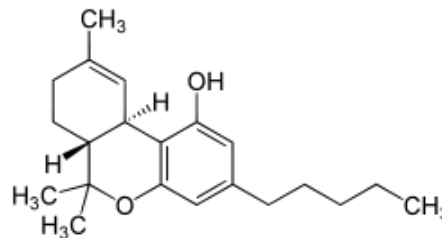


[https://www.reportecuatro.com.ar/imprimir\\_noticia.php?id=22308](https://www.reportecuatro.com.ar/imprimir_noticia.php?id=22308) 2020/12/2

Ganja  
チャラス  
Hashish



THC: Tetrahydrocannabinol



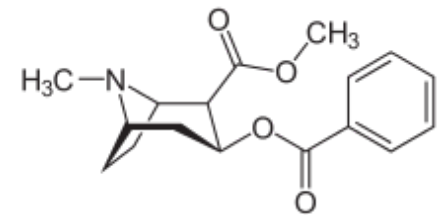
Coca コカ



©Wikipedia



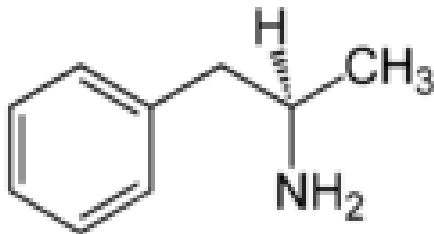
Cocaine



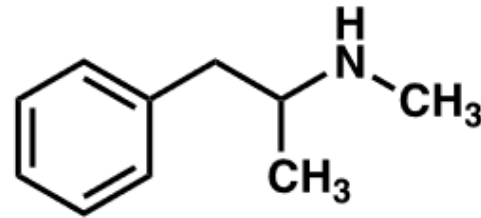
Corn poppy ヒナゲシ  
is different from  
opium.

# Narcotics made by chemical synthesis

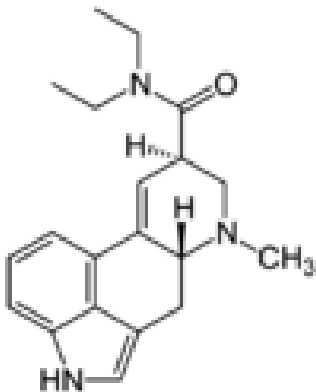
Amphetamine



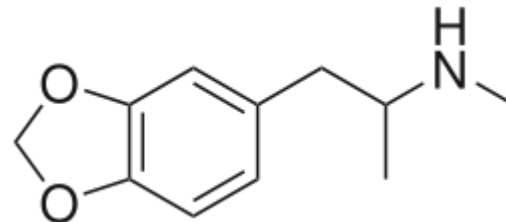
Methamphetamine  
Philopon<sup>®</sup>/**shaboo**/S/speed/  
ice/meth/crystal meth



LSD  
Lysergsäurediethylamid



MDMA/ecstasy/molly/E/X/EXC  
3,4-methylenedioxymethamphetamine

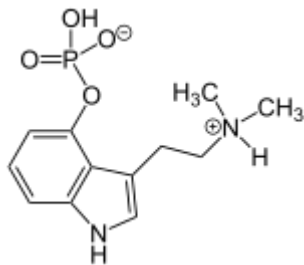


# Psychedelic drugs

Magic mushroom /  
Psychedelic mushroom /  
Psilocybe mushroom /  
Psilocybin mushroom



©Wikipedia

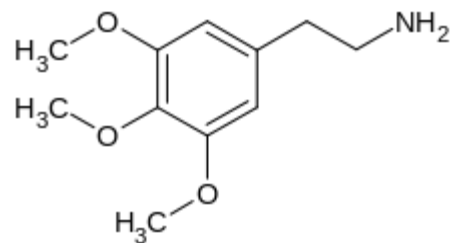


Psilocybin

Peyote



[https://www.ara.cat/societat/floristes-Ramblla-exemplars-allucinogena-prohibida\\_0\\_1535246645.html](https://www.ara.cat/societat/floristes-Ramblla-exemplars-allucinogena-prohibida_0_1535246645.html) 2020/12/2

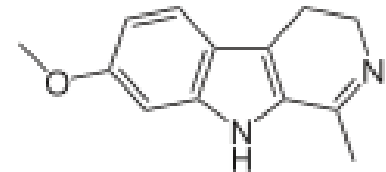


Mescaline

Ayahuasca



©Wikipedia



Harmaline

# Narcotics

Stimulation



覚醒剤

メタンフェタミン、アンフェタミン

Stimulants Control Act

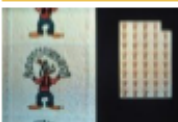
Hallucination



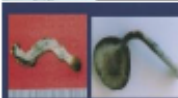
コカイン



MDMA



LSD



マジックマッシュルーム



ヘロイン  
モルヒネ



メチルフェニデート

(リタリン→向精神薬)

※不適正使用の場合

Narcotics and Psychotropics  
Control Act

麻薬170種類

向精神薬80種類



睡眠薬(向精神薬)

※不適正使用の場合

Repression



大麻



Cannabis Control Act



あへん(けしぼうず)

Opium Law

All the above

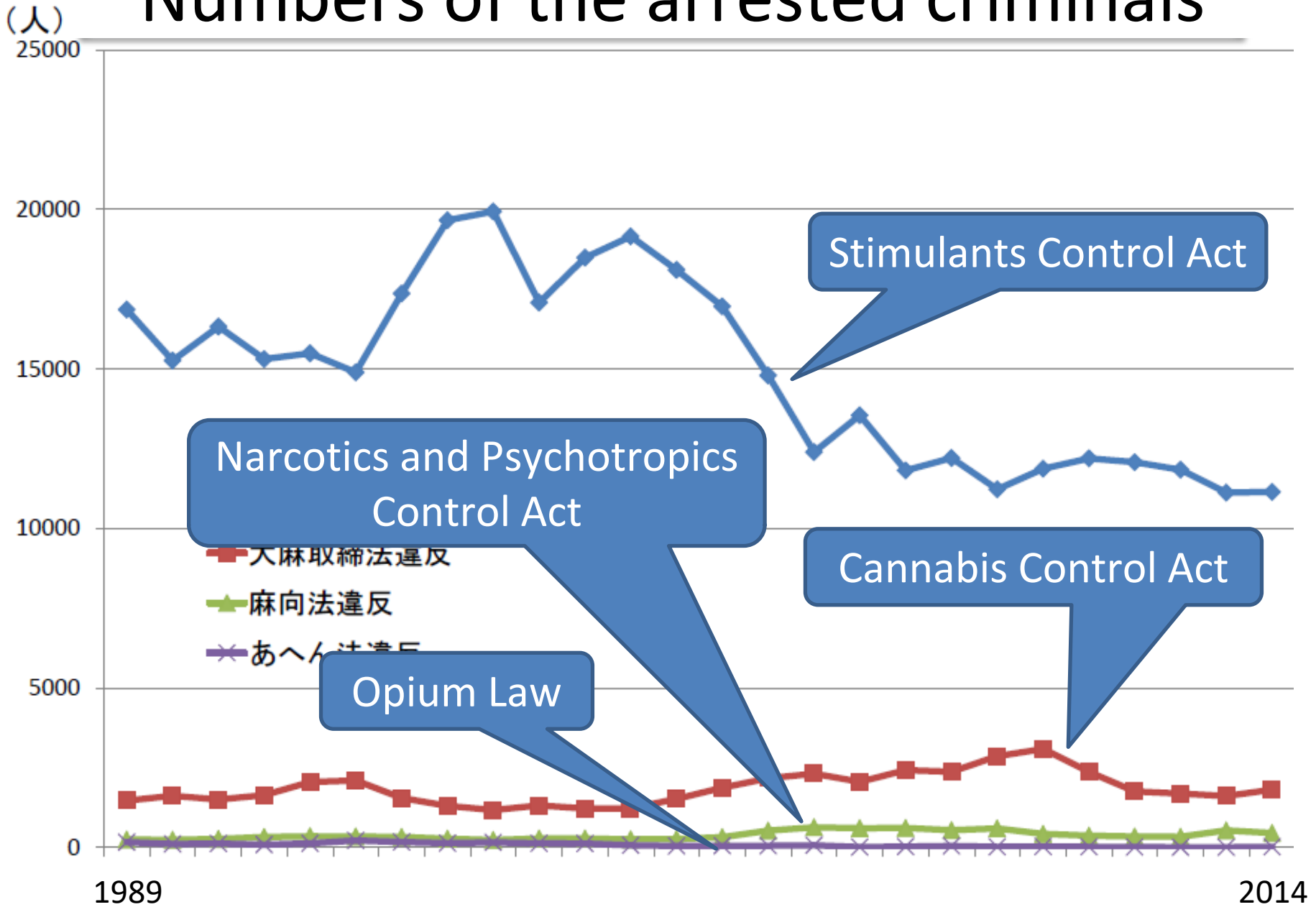


指定薬物

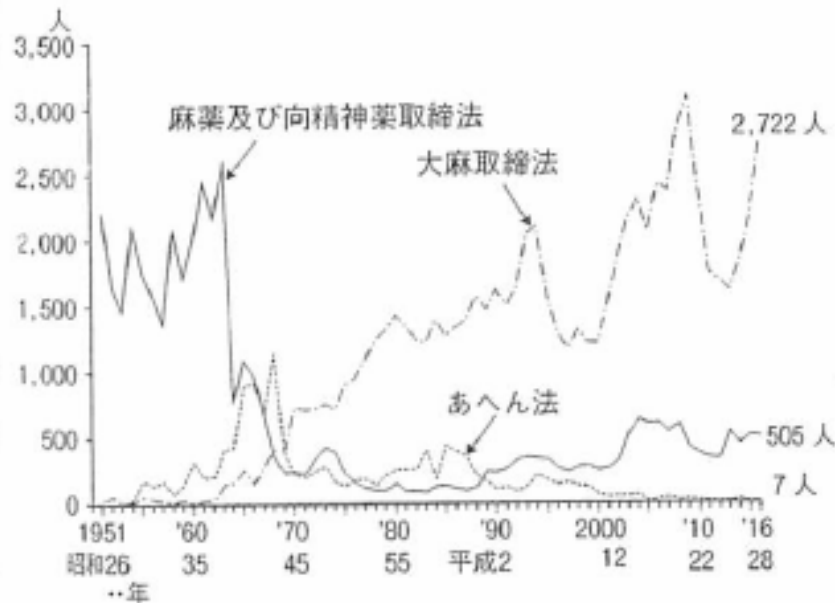
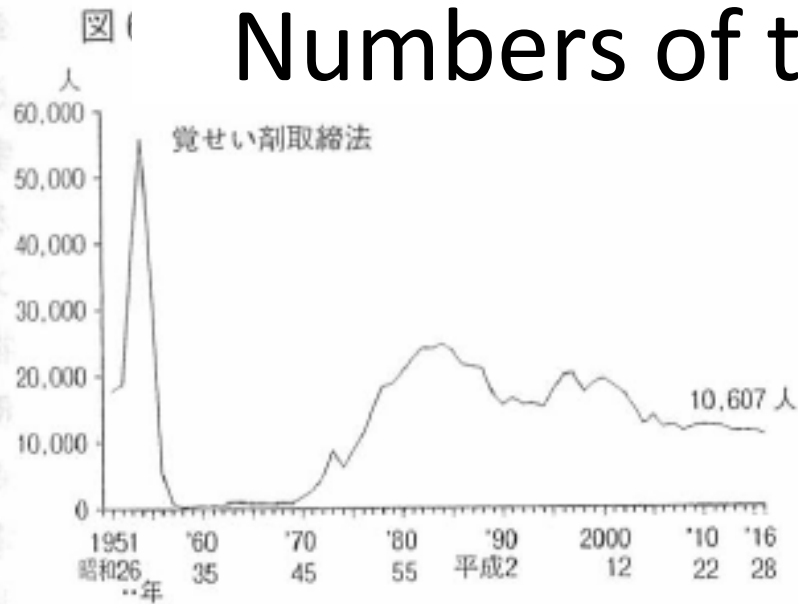
亜硝酸イソブチル、

Act on Securing Quality, Efficacy and  
Safety of Products Including  
Pharmaceuticals and Medical Devices

# Numbers of the arrested criminals



# Numbers of the arrested criminals



資料 警察庁、厚生労働省、海上保安庁の資料を集計（平成20年からの一部は内閣府集計による）

- 注 1) 昭和47年から沖縄を含む。  
2) 平成2年8月から麻薬及び向精神薬取締法が施行され、それ以前は麻薬取締法である。

In 2016

Stimulants Control Act

10,607

Cannabis Control Act

2,722

Narcotics and Psychotropics Control Act

505

Opium Law

7

Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices: 2,373 chemicals as of March 2018. All sellers were closed

# Narcotics and Psychotropics Control Act

"**Narcotics Handler**" means a Narcotics Importer, Narcotics Exporter, Narcotics Manufacturer, Formulator of Narcotic Pharmaceuticals, Manufacturer of Exempt Narcotics, Primary Wholesaler of Narcotics, Narcotics Wholesaler, Narcotics Retailer, Person Licensed to **Administer Narcotics**, Narcotics Manager, or Narcotics Researcher;

Chapter III Control of Psychotropics

Section 1 Licensing and Registration

Section 2 Prohibitions and Restrictions

Section 3 Handling

Section 4 Business Records and Notifications

Section 5 Miscellaneous Provisions

Opium  
Opium alkaloids  
Morphine  
Oxycodone  
Hydromorphone  
Tapentadol  
Fentanyl  
Pethidine  
Methadone

# Evaluating the Goto's performance in terms of public health

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## Opium monopolization

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Economical merits ?  
Public health ?

# Utilitarianism



**Utilitarianism** is a theory in normative ethics holding that the proper course of action is the one that **maximizes utility**, specifically defined as maximizing **happiness** and reducing suffering. Classic utilitarianism, as advocated by two influential contributors, Jeremy Bentham and John Stuart Mill, is hedonistic\*. It is now generally taken to be a form of **consequentialism**, although when Anscombe first introduced that term it was to distinguish between "old-fashioned Utilitarianism" and consequentialism. According to utilitarianism the moral worth of an action is determined only by its resulting outcome, although there is debate over how much consideration should be given to actual consequences, foreseen consequences and intended consequences.

\***Hedonism** is a school of thought that argues that pleasure is the only intrinsic good.

# Deontological ethics



**Deontological ethics** or **deontology** (from Greek *deon*, "obligation, duty"; and *-logia*) is the normative ethical position that judges the morality of an **action** based on the action's **adherence** to a rule or rules. It is sometimes described as "**duty**" or "**obligation**" or "**rule**" - based ethics, because rules "bind you to your duty". Deontological ethics is commonly contrasted to consequentialism. Deontological ethics is also contrasted to pragmatic ethics.



©wikipedia



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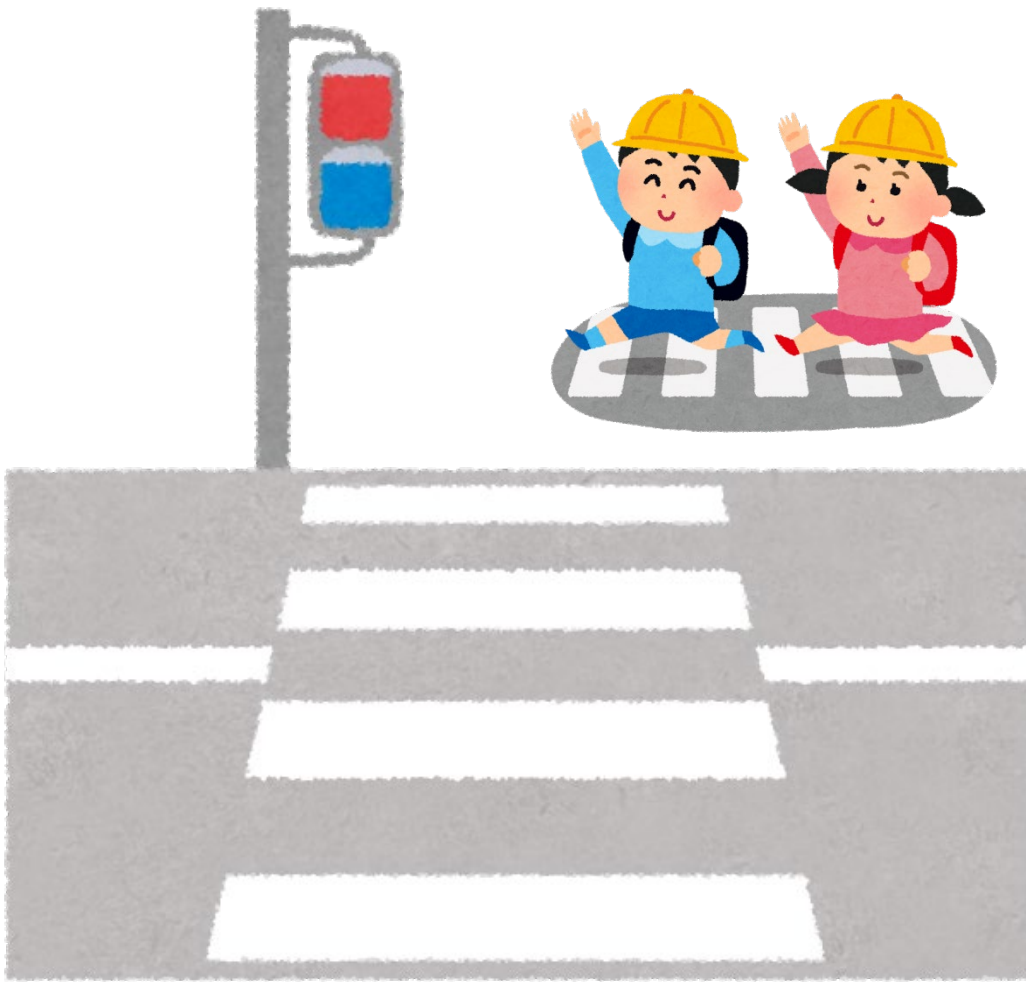
# Disadvantages

## Utilitarianism

1. Which is the appropriate method to **maximize utility or happiness?** It is not rare that the method cannot be decided even among specialists.
2. How to minimize or compensate the persons with damages due to the method.

## Deontological ethics

1. Which should be used for the rule?
2. The evaluation on the **adherence to a rule** may be done subjectively by a leader, if the rule is complicated.



Wow, children are watching.

The obedience of law is important.

This law is for the safety of pedestrians. If safety, there is no reason simply to obey the rule.

# 1. Subjects of ethics

---

		Action	
		Good	Bad
Intention	Good	○	?
	Bad	?	×

---

**2. Good for whom?**

**3. Who evaluates ?**

# **The question**

Which is the base of  
healthcare administration?

Utilitarianism or deontological ethics

# The question

Which is the base of  
healthcare administration?

## Utilitarianism or deontological ethics

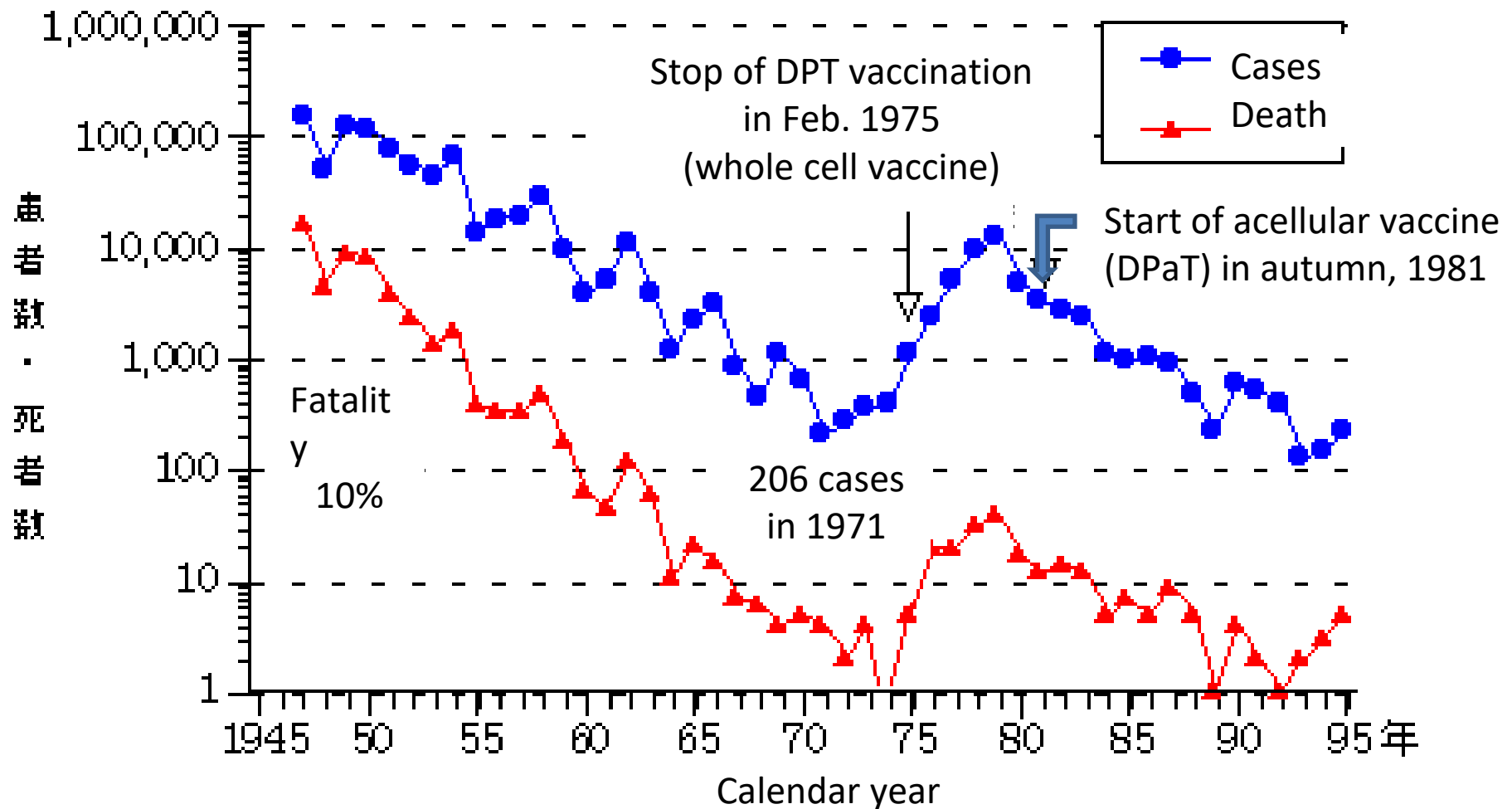
Philosophy of public health staff / researchers /  
educators : **Utilitarianism**

\* The efforts are needed to minimize the damages or  
injuries of given groups due to public health actions.

# Trends in reported cases and deaths from pertussis (whooping cough) in Japan

P vaccine in 1950, DP vaccine in 1958, DPT vaccine in 1968

Vaccine encephalopathy in 1970'



# Summary of Goto's achievements

1. Goto had medical knowledge, recognizing the **importance of public health**. It was great advantages over the officials with the other background.
2. Goto had a **strong power** as a government officer. It was advantageous over the other public health specialists.
3. There were **good precedents** for the administrative approach.
4. He started **from nothing**. The evaluation was simple and clear.
5. It was the era of **acute infectious diseases**. Improvement of public health is consistent with the development of the society.
6. The **usefulness** was clear for the persons in Taiwan, and his achievements actually contributed to the **modernization** of Taiwan.

# Public health

